

Non-Timber Forest Products Marketing Systems and Market Players in Southwest Virginia: Crafts, Medicinal and Herbal, and Specialty Wood Products

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ABSTRACT. Non-timber forest products (NTFPs) are important in rural southwest Virginia as a source of household income. Marketing system of crafts, medicinal and herbal, and specialty wood products are studied using exploratory and qualitative research methods. Fifty market players at various levels in marketing chains are interviewed to get the information on elements of marketing system—products, product differentiation, value addition, pricing, promotion, distribution, and marketing chains. NTFP trade is a common phenomenon in southwest Virginia. The greatest opportunity exists for local level marketing of crafts and specialty wood products. In the case of medicinal and herbal products, very little local value addition takes place within the region, and as a result local market players have little control. Policy interventions are required to enhance the returns to local collectors, which will also contribute to sustainable management of forest resources. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-342-9678. E-mail address: <getinfo@haworthpressinc.com> Website: <http://www.haworthpressinc.com>]*

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The economic contribution of timber products, specifically in temperate forests and developed world, is fairly well understood, quantified, and recorded. Hence, normally, policy makers often assume that forests are of no economic value unless they are harvested. However, non-timber forest products (NTFPs), that include all biological products other than timber, are a traditional source of household income in rural areas around the world. As a result, NTFPs can provide an important means for economic growth, specifically to man-made resource poor and forest resource abundant geographical areas. An important feature of NTFPs is the continuous flow of returns against timber returns that are available intermittently at an interval of rotation period, and this feature can be used intelligently and strategically for conservation of forest resources through proper forest management practices. However, knowledge of NTFP marketing is limited and sparse (Newman and Hammett 1994) while timber marketing and trade is extensively discussed in forestry literature. Hence, NTFPs marketing must be examined before NTFPs can be developed as a means to economic growth and forest conservation (Fox 1994).

NTFPs have economic and social values that surpass even timber products in some areas (Padoch 1992 and Peters, Gentry, and Mendelsohn 1989). In addition, market value and demand for NTFPs has grown considerably in the past ten to fifteen years while declining revenues from timber in some areas have encouraged foresters to consider the values of NTFPs (Savage 1995). It has been said of some forest regions that the sustainable exploitation of NTFPs is the most immediate and profitable method for integrating the use and conservation of forests (Browder 1992³³ and Peters, Gentry, and Mendelsohn 1989).

In the United States, exports of moss and lichen for commercial use were valued at \$14 million in 1995 (Vance 1995). The United States herbal market alone amounts to \$970 million and grows 13% to 15% annually while the worldwide market amounts to over \$60 billion (Goldberg 1996). Mater (1993) predicts that sales of medicinal herbs could reach \$5 billion by the year 2000, a large increase from its value of \$1.5 billion in 1995. A 1996 article in the New York Times (Gold-

berg 1996:6) states, "The market for forest products other than trees has mushroomed by nearly 20% annually over the last several years." Based on these trends of non-timber forest products there is cause for interest in marketing systems of NTFPs.

One region of the United States in which NTFPs play an especially important role in household and community economies is southwest Virginia. The value of the NTFP industry in Virginia was \$35 million in 1995 and has grown 25% to 30% annually at times. This value is predicted to be greater than \$1.05 billion by the year 2000. The high value of Virginia's NTFPs can be credited to its rich biodiversity, typical of the Appalachian region. Despite, the region's potential to be a vital supplier to rapidly growing NTFP markets, lack of information about NTFP marketing is an obstacle to the optimal economic returns. High unemployment rate and heavy dependence upon the declining coal industry are two factors which give urgency to the development of NTFPs as an income-generating opportunity. Understanding current marketing systems is critical to provide a basis for economic growth and sustainable management of forest resources in the light of rapidly increasing demand for NTFPs in this region.

In this paper, we present the findings of a pioneer study of NTFP marketing in southwest Virginia, that was designed as an exploratory and qualitative study, for three product categories: crafts, medicinal and herbal, and specialty wood products. Although specialty wood products are of timber origin, they are included in the paper because, like other NTFPs, they are a local source of income different from typical forest products industries. The main objective of this paper is to provide an overview of marketing systems in the region which can be used by forest managers and policy makers, and not to develop theoretical framework for evaluating the role of NTFPs in economic development. Hence, aspects of marketing such as products, pricing, promotion, and distribution are described and discussed for each category of products. Furthermore, market players are analyzed according to their roles in the marketing chain. Players are examined in a limited sense in that only those individuals who play active roles in marketing are included. Our interest is not in land ownership and therefore, landowners as players in the marketing chain are not discussed. First, previous studies on NTFP marketing are reviewed. Second, the study site of the research is discussed. Third, methodology employed in the research is described. Fourth, findings are discussed separately for

crafts, medicinal and herbal, and specialty wood products. Finally, some policy suggestions are drawn based on our findings.

REVIEW OF NTFP MARKETING STUDIES

Most countries do not have scientific data about NTFPs or their markets (Von Hagen et al. 1996). NTFP marketing has been largely ignored in research and management partly due to their inherent geographic fragmentation and lower dollar returns per unit of labor time than timber products (Mater 1993). However, studies have been done which compare the economic value of managing a forest for NTFPs with timber and agriculture production (Peters, Gentry, and Mendelsohn 1989, Von Hagen et al. 1996).

Marketing chains are the skeleton of marketing systems, and, hence, several studies have described NTFP marketing chains. Edwards (1996) conducted a study of NTFPs marketed from Nepal to traditional medicine and essential oils industries in India. The study revealed a marketing chain consisting of various levels-local collectors, village traders, road-head traders, large traders, Indian wholesale and commission agents, and finally Indian industrial units. Most harvesters trade NTFPs through a village trader. Road-head traders are valuable to harvesters and village traders for providing credit, storage, and market information, and absorbing market risk. The large Nepali traders ship NTFPs to Indian wholesale and commission agents who finally sell it to industrial units. The study found that trade contributes US\$8.6 million per year to Nepal's national economy, a value six times that of Nepal's official timber exports to India, and several hundred thousand workers are supported who depend on the trade for over 50% of their household income.

Padoch (1992) analyzed marketing chain for the aguaje fruit in the city of Iquitos, Peru. First, a large urban dealer or wholesaler makes a contract with a rural-based extractor. Extractors often subcontract harvesters, however, the extractor's responsibility is to see that the fruit gets to market quickly and in good condition. Despite contracts, much of the fruit is not received by the dealer who initially contracted with extractor. Many people rush to the port when products arrive and if a better price is offered for the fruit, the extractor is likely to sell the fruit. Some dealers have left the business because of the uncertainty in securing products.

Everett (1996) studied NTFP marketing in the Pacific Northwest that gives some insight of the inefficiency of the marketing system. System is controlled by urban-based and capital-intensive industrial units which buy NTFPs from communities. Obstacles to effective marketing include waste and over harvest of products, conflicts and communication barriers between ethnic groups and institutions, and the government's inability to adequately manage NTFP resources.

Various efforts have been made to improve NTFP marketing systems by addressing their inefficiencies and inequities (Padoch 1992 and Everett 1996). For example, non-government organizations and the state Forest Departments are trying to increase returns to NTFPs collectors through cooperative organizations (Kant 1997). Several countries have protocols to inventory and value NTFP stocks, such as Sweden, Finland, Lithuania, Latvia, Estonia, Russia, and Poland (Von Hagen et al. 1996). In addition, regional reports from both the United Nations Food and Agriculture Organization and the European Union provide comparative information for some countries (Von Hagen et al. 1996). However, more information on NTFP marketing and development of government and non-government institutional capacity for marketing NTFPs will be required before NTFPs can become optimally profitable and balanced within the limits of forest production system (Everett 1996).

In the United States, a study was conducted in Michigan's upper peninsula which reveals cultural features of the first level in the marketing chain, collectors (Emery 1996). Norms of the collectors for sustainability is the main feature of the region. Norms include taking only what is needed without damaging the forest, selective gathering to leave stock for future growth, protecting sites from over harvest, and promoting growth by harvesting techniques and propagation (Emery 1996). Those who follow these norms, the collectors, are typically the poorest individuals in the marketing chain (Padoch 1992). This observation is supported by Fearnside (1989) who notes that collectors remain poor regardless of the amount of wealth they generate when the value of products accrues to intermediaries. In cases where a raw material is removed from communities, collectors have little opportunity for value addition. In addition, collectors have little say in changing NTFP markets since regulation is largely out of their hands (Browder 1992).

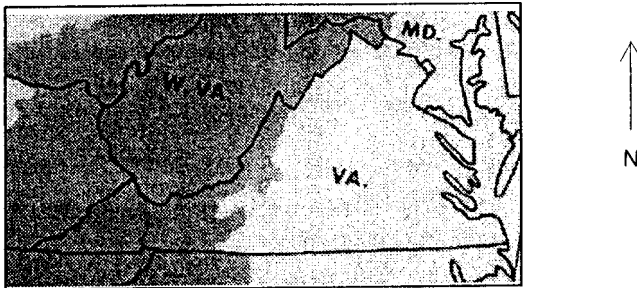
Hence, there are some studies on marketing systems of NTFPs. But,

marketing of NTFPs in southwest Virginia could not attract the attention of researchers. Next, we discuss the study site of this research.

Study Site

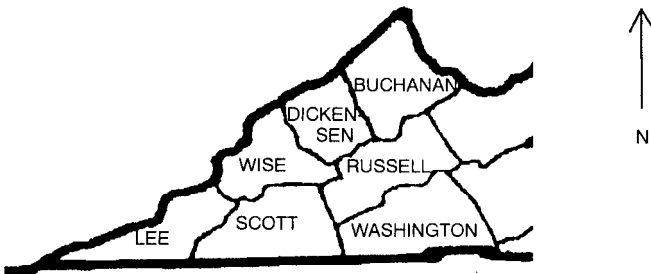
The study site includes seven southwest Virginia counties: Buchanan, Dickenson, Lee, Russell, Scott, Washington, and Wise. These counties were selected because they constitute a major portion of southwest Virginia and have common natural, social, and economic characteristics that indicate high forest dependence. Figure 1 is a map of Virginia showing the mountainous Appalachian region and Figure 2 depicts the study site.

FIGURE 1. Map of Virginia (VA) (Shaded area is Appalachian region)



Adapted from: Rothblatt 1971

FIGURE 2. Map of southwest Virginia and seven counties in study site



Adapted from: Rothblatt 1971

METHODOLOGY

As stated before, research is designed as an exploratory and qualitative research because little organized information of NTFPs existed in the study site. The basic purpose of research is to provide detailed information about market players in southwest Virginia. Methodology for this study is modeled after several other NTFPs studies which utilize exploratory and qualitative designs (Richards 1997, Emery 1996, Mater 1993).

Primary data was collected through direct in-person interviews with market players. Market players are defined as individuals or institutions that have a role in the marketing chain and include collectors, dealers, producers, and sellers. Interviews were conducted within three product categories: craft, medicinal/herbal, and specialty wood products. These categories were chosen due to their expected importance in the NTFP trade in southwest Virginia (Hammett and Chamberlain 1997). Three non-probability sampling methods were utilized to identify market players as informants: (i) *snowball*, where subjects are found as a reference from other subjects; (ii) *convenience*, where subjects are picked according to what is conveniently available; and (iii) *purposeful*, where samples are selected out of the population for having certain characteristics such as ease of access and representability (Adams and Schvanedeldt 1991, Richards 1997). Table 1 shows the numbers of market players interviewed in each NTFP category.

Interviews were designed to document and describe important NTFPs, their marketing systems, and functions of market players. Interviews took place between January and October 1997. Marketing chains for each NTFP category were followed from collector (harvester) to seller, and market players interviewed on the topics of products, pricing, promotion, and distribution. Interviews were semi-structured to allow flexibility consistent with the study's exploratory design.

Next, we discuss marketing systems of three categories of products.

TABLE 1. Number of market players interviewed

craft products	20 total; 5 collectors, 5 producers, 10 sellers
medicinal/herbal products	18 total; 5 collectors, 3 dealers, 5 producers, 5 sellers
specialty wood products	15 total; 5 collectors, 5 producers, 5 sellers
all categories	53 total; 15 collectors; 3 dealers, 15 producers, 20 sellers

MARKETING SYSTEM OF NTFP CRAFTS

NTFP crafts are an important source of income and social activity traditional to southwest Virginia. Wreaths and baskets made from grapevine are common NTFP crafts seen in many market outlets in the area. Product differentiation is practiced to a great degree in sizes of wreaths and baskets, and types of decoration used. Wreath sizes vary from approximately eight inches to three feet in diameter. Basket sizes vary from six inches to three feet tall. Crafts are decorated with dried or synthetic flowers, ribbons, or other ornaments.

Crafters who sell undecorated products are usually of poorer socioeconomic level and tend to live in more rural and remote areas than other crafters. These crafters may not afford to buy decorations or are not able to easily travel to urban locations where craft supply stores sell decorations. However, they have easy and often, free, access to wild growing grapevines from which they can make wreaths and baskets. These crafters load a vehicle with products and travel to towns several times per month seeking buyers, such as craft stores and florists. One florist remarked of a wreath supplier, "whenever he gets broke, he comes in to sell."

Crafters who sell decorated wreaths and baskets often own a florist shop, craft supply store, or gift store and sell in local craft shows. Florists and small gift shops are located in nearly every town in southwest Virginia and are common market outlets for grapevine products. Some stores are more selective than others as to quality they accept from crafters. Stores in historic tourist centers stock products of higher quality, unique, and decorated products. As a result, higher prices are charged which may be affordable for tourists but not local residents. Also these stores which cater to tourists have more modern business operations in that they usually have a cash register and special displays and lighting.

Another market outlet is the local craft shows frequently held during summer and fall festivals in southwest Virginia. Crafters spend months in the off seasons preparing products, and, during the festival, set up sales booths on the street or indoor locations. Festivals also attract tourists, the most lucrative target buyers for grapevine crafters.

The most famous craft show in southwest Virginia occurs during the annual two-week long Virginia Highlands Festival held in Abingdon during August. The craft show is selective and only accepts crafts

of the highest quality. Crafters send slides of their products, in advance, to a show panel that judges and selects those crafters of the highest quality to join the show. Each admitted crafter then pays a fee to reserve a booth. However, due to the cost of traveling to Abingdon from rural parts of southwest Virginia and high quality standards, only the best and most rich crafters are able to afford this show.

A unique market outlet for NTFP craft items is the Appalmade store in Abingdon, a craft store which buys locally made crafts. This store accepts on a limited basis various types of crafts from poor crafters who live in remote areas. Appalmade performs a service by providing a market outlet for products which otherwise would be confined to rural areas. Crafters of these products usually are unable to travel to urban market locations and tourist centers. Appalmade arranges to transport products from the crafters home to the Appalmade store. Products sold in the store are attractive and well-made, however, are of lower quality than those accepted for sale in higher scale gift and craft shops, Appalmade also features products in a catalog that has resulted in orders from around the United States.

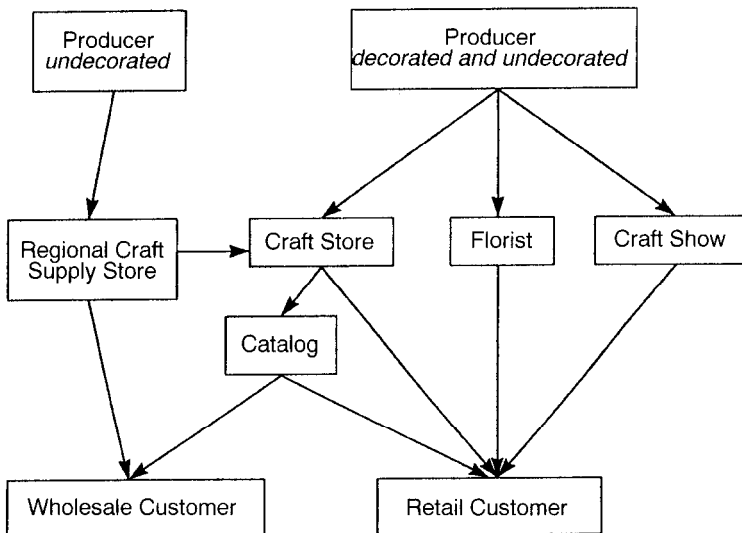
Prices for grapevine wreaths and baskets are determined according to materials costs and labor time. Although grapevine is very common, crafters remark that raw material acquisition is the hardest task in the production process because of labor in dragging the vines out of the forest and cleaning them. Winding and fastening of the wreath takes approximately fifteen minutes or more depending on the crafter's skill level. Baskets are much more time-consuming and require a higher degree of skill. One crafter remarked that the difficulty and time required in making baskets is the reason for their relatively high price, as perceived by local people. Prices vary with size, amount of decoration, and location of sale. Retail prices for undecorated wreaths range from \$8 to \$20 and baskets from \$10 to \$25, depending on the size. Decorated wreaths range from \$25 to \$35 and decorated baskets from \$35 to \$45. Large wreaths four to five feet in diameter may be sold for \$100. Prices may be higher or lower depending on product quality and sale location. Prices are higher in the urban locations of Abingdon and Bristol and at the Virginia Highlands Festival. Craft stores in these cities often sell on consignment where stores take a percentage of the craft price as store profit and return the rest to the crafter. Some crafters prefer not to sell in this manner because they feel the consignment percentage taken out of their products' sale is too

high. A positive aspect of these stores is that they provide access to these products to many urban consumers.

Promotion of grapevine products is not sophisticated or extensively planned in southwest Virginia. Traveling crafters who sell undecorated products promote their products by word of mouth. These individuals who live in remote areas may not have phones. Consequently, they are difficult to locate and options for promotion of their products is limited. On the other hand, craft stores and florists are registered businesses and are thereby usually listed in the phone directory and owners have business cards, they also put advertisements in newspapers. Promotion also occurs as owners and crafters take part in craft shows. Shop location is also vital to promotion. For example, location on a busy street corner will provide more exposure than on a side street.

Figure 3 is a diagram of the marketing chain for grapevine products. The first level of the chain is the producer whose function is to collect and clean grapevines and make a product. An individual rarely collects and sells grapevines since prices for raw material are much lower than for a finished product. As a result, it is economically sensible to not only collect grapevines, but also craft a product. Grapevine

FIGURE 3. Marketing chains for decorated and undecorated grapevine products in southwest Virginia



wreaths and baskets leave the hands of the producer either decorated or undecorated. If undecorated and bought by a florist, the product will be decorated and sold in the florist shop as part of a floral arrangement. Craft storeowners may buy decorated or undecorated products. Such products may be sold undecorated or value may be added by decoration. Some craft storeowners also sell products in local craft shows and through catalogs that may include photos of products and be distributed around the United States. Some crafters make, decorate, and sell their products without involving any intermediary that gives them control over the entire marketing chain. These crafters often distribute their products in craft shows and festivals because these market outlets attract many tourists and locals.

The producer of undecorated products, shown on the left side of Figure 3, sells products mainly to regional craft supply stores. Florists and craft stores buy undecorated grapevine products from these stores. Many urban people who enjoy making grapevine products and do not own a craft store, purchase products from the craft supply stores and decorate them either for themselves, gift-giving, or local craft shows. Craft supply stores also service local and distant wholesale customers. Wholesale customers include businesses, offices, universities, and other institutions.

In the most cases, the entire marketing chain of grapevine products takes place within southwest Virginia. Producers often live in rural locations where grapevine is easily available. Craft stores, florists, and craft shows usually are located in towns and cities and regional craft supply stores in the larger cities of southwest Virginia, Abingdon and Bristol. The majority of consumers is from Virginia. However, in few cases, the marketing chain extends beyond southwest Virginia. For example, some tourists, who visit the region mostly in summer and early fall, are from around the United States and the world. Some wholesale customers are also located in the eastern United States and in large urban locations, such as New York City, Washington DC, Baltimore, Philadelphia, Raleigh, and Atlanta.

MARKETING SYSTEMS FOR MEDICINAL AND HERBAL NTFPS

The region supplies medicinal and herbal products in raw material form to cosmetic, pharmaceutical, and other industries around the

United States and world. People are attracted to medicinal and herbal NTFP collection by the immediate cash payments from selling to local dealers. Collectors are mainly low-income earners who use collection of these products to supplement their income, and normally these incomes from collection are unreported.

Unlike the trade in NTFP crafts, medicinal and herbal NTFPs are removed from southwest Virginia as raw materials. Some products return to southwest Virginia in processed form as pills, capsules, food, teas, tinctures and are sold in health food and drug stores throughout the area. Many of the products are sold to buyers in the European health food and nutritional supplement market and ginseng collected in southwest Virginia is almost exclusively sold to buyers from east Asia. Some NTFPs, such as slippery elm bark, are processed into cosmetics and return to southwest Virginia for sale in drug and cosmetic stores. Products sold in retail stores of southwest Virginia are usually competitively priced and many residents can afford to buy them.

Value addition at the collector's level is limited due to lack of resources and market knowledge. The extent of collectors' value addition is cleaning, drying, and sorting of NTFPs, which are usually required by dealers. Some dealers dry NTFPs and sort them into larger bales and sacks. Even at the dealer level, value addition is limited by the Food and Drug Administration and industrial buyers' quality standards (Center for Appalachian Studies and Services 1989). Buyers often conduct chemical analyses in laboratories in order to meet their own standards and those of the Food and Drug Administration. Often, buyers will test each bale or barrel of raw material. If the product fails to meet standards, the whole quantity can be returned to the dealer.

Producers outside of southwest Virginia set prices at which they will buy medicinal and herbal NTFPs. Dealers within the region are notified of these prices and can adjust the price at which they buy products from collectors to allow their margin of profit. Prices for medicinal and herbal NTFPs vary by dealer and demand. For example, one dealer bought bloodroot at \$3.50 per pound in 1996 and another dealer bought at \$4.00 per pound. Collectors are at liberty to sell to the dealer who gives the highest price. Prices also vary with market demand. Hence, the main driving force behind the collection of products is the demand and the availability of products in forests plays a second-

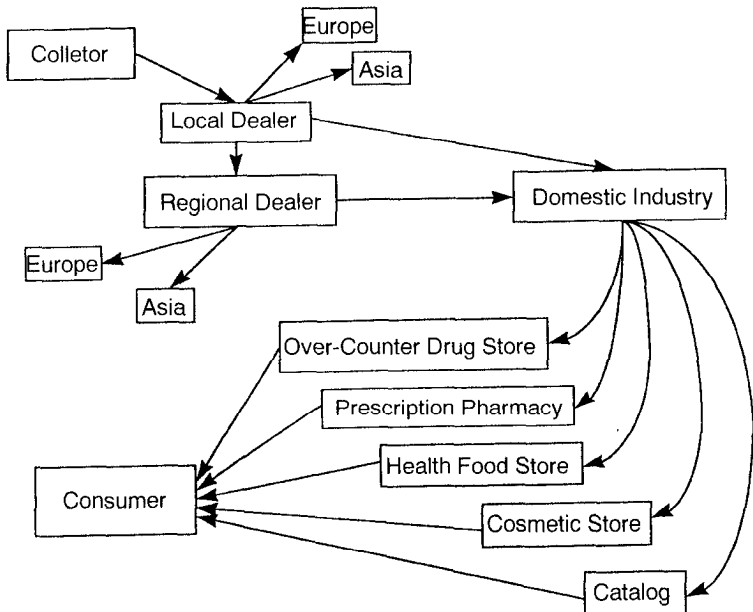
dary role. Therefore, collectors collect different NTFPs in different years, which have higher demand in that year.

Producers appear to have control over the NTFPs trade since they regulate prices. This indicates a similarity between the medicinal and herbal NTFPs trade and historic industries in southwest Virginia. The removal of medicinal and herbal raw material is essentially the same as the removal of natural resources such as coal, mineral, timber, and tobacco by outside market players who control prices. Local residents have typically had little control over a trade that removes a raw material from the region.

Promotion of products is mainly performed by producers outside of southwest Virginia. Levels of the marketing chain below producers do not advertise greatly because competition is not so keen at these levels. Producers often print brochures and store displays to promote their products.

The marketing chain for medicinal and herbal NTFPs can be described as given in Figure 4. The first level of the marketing chain is

FIGURE 4. Marketing chains for medicinal and herbal NTFPs from southwest Virginia



product collection. Collectors then sell NTFPs to local dealers as cleaned, dried, and mold-free raw material. These dealers interact with three potential buyers: larger regional dealers, industrial buyers, and foreign buyers. Large regional dealers exist outside of southwest Virginia. In comparison with dealers in southwest Virginia, larger dealers have greater capital investment in storage facilities and baling and transport machinery. All dealers located within southwest Virginia can be considered small based on the NTFP volumes they buy and sell as compared with large regional dealers. Dealers sometimes sell directly to industrial producers who place orders from outside of the region. These producers process NTFPs into their final form. Some dealers ship most of their products to Europe where the health food and supplement industry has typically been larger than in the United States. Other foreign buyers are from southeast Asia, particularly China.

The next level in the marketing chain consists of medicinal and herbal product producers. These producers include pharmaceutical, cosmetic, and health food/dietary supplement industries. NTFPs are processed into their final form (capsule, pills, cosmetics, tea, lotions, etc.) by these industries and are mainly distributed throughout North America, Europe, Australia, and Asia. Products are sold in retail or wholesale sales centers including over-the-counter drug stores, prescription drug pharmacies, cosmetic stores, health food stores, and catalog sales. Products are then sold to the final level in the marketing chain, the consumer.

MARKETING SYSTEMS FOR SPECIALTY WOOD PRODUCTS

Specialty wood products include carvings, musical instruments, bowls, walking sticks, and crafts. These products may not be considered actual NTFPs because of their timber origin. However, they can be considered a special category that includes NTFPs and timber products other than those used for construction (Mater 1993). Specialty wood products are included in this research because these products have similar effects on local people as NTFPs, such as craft products and medicinal/herbal products.

Some of the most common instruments are highlighted in Table 2. Musical instruments are often products of materials obtained from

TABLE 2. Musical instruments commonly manufactured in southwest Virginia.

Instrument	Description
Mouth bow	a simple wooden bow having a string or wire tied to each end; positioned by placing one end of the bow in the mouth; rhythm created by plucking the string and pitch adjusted by increasing or decreasing the size of the mouth cavity (Irving 1997); made of hickory or red cedar.
Fiddle	most widely accepted Appalachian instrument; claimed to be the only instrument treasured equally in rich mansions and dirt floor Appalachian cabins; quality varies widely and price can range from \$10 to a \$250,000 dollars (Irving 1997).
Banjo	known as the only musical instrument indigenous to America; first banjo made in Appalachia by Joel Walker Sweeney, born in 1810. Banjo popularity spread fast and Sweeney played in surrounding states and Europe. Soon, several American firms started manufacturing banjos. However, mountain people were not accustomed to store bought! merchandise and preferred making their own (Conway 1995).
Dulcimer	first found in Pennsylvania in the 1770s and later in Appalachia, where the dulcimer acquired a curvier shape, less rectangular than the dulcimer of Pennsylvania; most common in Lee and Scott counties of southwest Virginia than any other county in Appalachia; often made of pine or cherry. The dulcimer gained popularity after the civil war but declined during the early 1900s. Today, dulcimer popularity is revived and it is frequently sold in southwest Virginia (Irving 1997).
Guitar	came late to Appalachia in comparison with the other instruments. It wasn't until well into the 20th century that guitar gained acceptance and in the 1930s guitar was commonplace. Guitar quickly became a vital part of the stringed band highly popular in Appalachia. Today, most guitars are brought from dealers outside of southwest Virginia. However, a few accomplished manufacturers still exist in the region and make use of the supply of curly maple from forested mountains (Irving 1977).

various locations. Native species of southwest Virginia used for instrument manufacturing are maple (*Acer* spp.), black walnut (*Juglans nigra*), Appalachian red spruce (*Picea rubens*), and Eastern redcedar (*Juniperus virginiana*). Other species commonly used and imported into southwest Virginia are Western redcedar (*Thuja plicata*), redwood (*Sequoia sempervirens*), mahogany (*Sweetinia macrophylla*), and ebony (*Diospyros virginiana*). Wood characteristics such as grain pattern, color, strength, and hardness influence the choice of woods for instruments. These characteristics determine the instrument's aesthetic beauty and sound quality. For example, some claim that Western red cedar is better than that of Eastern red cedar for making instruments

because its greater hardness gives better sound quality. As a result, serious instrument manufacturers who prefer better sound quality will use Western instead of Eastern red cedar.

Market outlets for musical instruments made in southwest Virginia depend on the quality of the instrument. Since instrument making is highly traditional, there are many who have made instruments but only a few who have mastered the art and created a name for themselves. Musical instrument making is highly competitive and festivals, such as bluegrass festivals, are held where makers show off and compare instrument quality. Only quality instruments are bought by musicians for their own use or by dealers for sale in music stores. These instruments are usually made by well-known people who have years of experience in instrument making.

Some musical instrument makers are contracted by a larger manufacturer to make instrument parts. The parts are then transported to the manufacturer who assembles the instrument from parts having origins throughout the United States and world. One such maker has a small workshop in the mountains of southwest Virginia to manufacture guitar tops of curly maple. Curly maple has grain prized for its beauty in a finished and polished instrument. The relatively rare curly grain results from abrupt and repeated right and left deviations from the vertical in fiber alignment, caused by tree growth in windy and steep mountain slopes. Most local makers do not have contracts with large manufacturers because of the small scale of their operation and limited contacts outside the region. In addition, large manufacturers choose very carefully their suppliers from the large number of part manufacturers all over the world.

Although many famous name instruments reach a wider global market, but locally made instruments of high quality are also in demand. For example, one experienced and locally renowned mandolin maker has a waiting list of people who want to purchase his curly maple mandolins. Traditional Appalachian dulcimers are the only instruments indigenous to the region and these are high in demand by tourists. As a result, marketing of dulcimers is directed more toward tourists who collect novelties than serious musicians.

Value addition on musical instruments is limited for makers who are contracted to supply parts to large manufacturers. These makers obtain the wood and cut out the part while the manufacturer assembles, finishes, and polishes the finished instrument. Other makers, artistical-

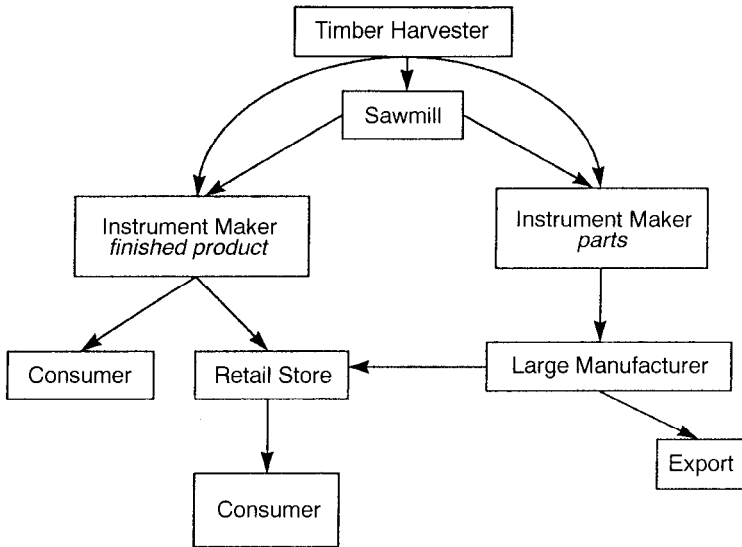
ly finish and decorate their instrument. These additions are not of local NTFPs, but may include adding an imported wooden part or inlaid mother of pearl designs in the wood. Dulcimer makers may add value by selling their instruments together with music sheets and instructions, since many buyers have never played the instrument before. These music sheets often include traditional folk tunes that appeal to tourists who seek traditional Appalachian items.

Prices for musical instruments vary with the type of instrument, quality, length of time needed for manufacture, and cost of parts. Prices of at least two thousand dollars per banjo may be charged, depending on the quality of parts and designs. Dulcimers are priced much lower to be attractive to tourists and also require less time in manufacture. Depending on size and quality, dulcimers are locally priced from fifty to two hundred dollars.

Musical instruments are promoted by local makers mainly through word of mouth. The annual local and regional bluegrass and country music festivals provide exposure and friendly competition for instrument makers. The manufacturers become known only through praise from their previous customers. Musical instrument stores advertise more purposefully than individual makers. These businesses may advertise through radio and newspapers and by creating a reputation of quality products and service. Lessons are often given at the stores that draw customers to purchase instruments. However, most of the instruments sold are not locally made but are brand name instruments manufactured in other parts of the United States and the world. The manufacturers of these popular instruments often distribute brochures about the instruments to music stores where customers take them freely. Local makers do not have the resources or a wide enough market to invest in literature.

Figure 5 is a diagram of the marketing chains for musical instruments. The first level of the chain is the timber harvester who cuts the tree from which wood for the total instrument or portions originate. The log is either bought and sawed by the instrument manufacturer or bought by a sawmill which saws the log into boards and sells them to the instrument maker. Since instrument manufacture uses a variety of woods from around the world, the manufacturer is likely to search for suitable raw material within and outside of southwest Virginia. Curly maple, Appalachian red spruce, Eastern red cedar, and black walnut are common species obtained in southwest Virginia. Others such as

FIGURE 5. Marketing chains for musical instruments manufactured in south-west Virginia



redwood, Western red cedar, and ebony must be imported from other parts of the world. A manufacturer typically orders these wood species from tropical wood dealers in the United States.

Instrument manufacturers can be divided into two categories in the marketing chain. One is a manufacturer of a finished instrument. This manufacturer buys all woods, parts, and finishing materials and establishes a price based on labor time and cost of materials. This manufacturer may sell directly to individual customers or to retail music and instrument stores where consumers buy instruments. This maker may take orders for instruments and have a waiting list of those wishing to buy instruments. Local retail stores which buy instruments mark up the price to allow a profit margin. The second type of manufacturer makes instrument parts for sale to a larger manufacturer who assembles the finished product. Instrument parts made in southwest Virginia include guitar and mandolin tops and/or backs from local curly maple and stringed instrument necks. The finished product is usually sold to retail music and instrument stores around the country or exported.

CONCLUSIONS

Craft, medicinal and herbal, and specialty wood products are widely collected and produced by people in southwest Virginia. Marketing systems of these products have evolved over generations and collection and production is highly traditional. Many similarities can be seen in the relationships among NTFPs, market players, and marketing in southwest Virginia with other parts of the world. First, collectors of raw materials and producers of average quality products are typically the poorest market players in the marketing chain. This conclusion is consistent with Browder's (1992) observation that collectors and local level traders have the lowest socioeconomic class. Fearnside (1989:391) observes that, "when the value of products accrues to intermediaries, extractivists remain poor regardless of the amount of wealth they generate." This situation applies to the trade of medicinal and herbal NTFPs in southwest Virginia. However, Browder's (1992) observation that lack of market control is responsible for poor economic conditions of collectors is not entirely true for NTFP crafts and specialty wood products in southwest Virginia. The reason market players of NTFP crafts and specialty wood products remain poor may be more due to lack of market access rather than limited market control.

Most value addition for NTFP crafts and specialty wood products (excluding instrument parts manufacture) occurs in southwest Virginia and for medicinal and herbal products occurs out of the region. Hence, collectors of medicinal and herbal NTFPs may be the poorest. This conclusion is again consistent with Fearnside (1989) in that when value accrues to intermediary collectors remain poor, as is the case in medicinal and herbal NTFP trade. Finally, local level market players of NTFP crafts and specialty wood products have more control over marketing elements as compared to local market players of medicinal and herbal NTFPs. Hence, fluctuations in prices during boom and bust cycles (Everett 1996) have more impact on market players of medicinal and herbal NTFPs. However, growing medicinal and herbal markets (Mater 1993) and their worldwide distribution areas may lead to increased marketing opportunity for medicinal and herbal market players. Conversely, the market size and area of NTFP crafts and specialty wood products is more limited.

Hence, the situation of NTFPs marketing and returns from these products to local people are not much different than that of situation in

many tropical and developing countries. This demands an aggressive policy intervention to strengthen the economic situation of these local people. These interventions may be to: (i) improve market access, through internet based advertisement, order processing, and shipping of products; (ii) enlarge the scale of operations, through NTFPs based forest management systems or cultivation of some herbal crops in agro-forestry systems; (iii) develop local markets for non-processed or semi-processed herbal medicines; and (iv) increase the bargaining power of local marketing agents through establishment of a local NTFP agency. The effective policy interventions will improve the stake of local people in the existing forests which will facilitate their cooperation in sustainable forest management strategies of forest managers.

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